

**REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow. Claims 1-29 were previously cancelled. Claims 30-49 are currently pending in this application.

**I. Claim Rejections Under 35 U.S.C. § 102 Based on Chiang**

On page 2 of the Office Action, Claims 30-32, 34-37, 39, 40, 42-44, 46, 47 and 49 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,813,266 (Chiang). Applicant respectfully traverses this rejection.

**A. Chiang does not teach the claimed “initiating a transmission of the first portion of the first frame into a shared communications channel,” “wherein the first portion is less than a frame length.”**

Claim 30 recites in part “initiating a transmission of the first portion of the first frame into a shared communications channel,” “wherein the first portion is less than a frame length.” Claims 39 and 47, although different in scope, contain a similar element. In the latest Office Action, the Examiner did not indicate where Chiang disclosed this element. In the previous Office Action dated October 1, 2009, the Examiner cited to column 7, lines 40-48 of Chiang as disclosing this feature. On page 4 of the October 1, 2009 Office Action, the Examiner asserted that “the frame portions are transmitted from the queue.” Applicant respectfully disagrees that Chiang teaches the claimed element of “initiating a transmission of the first portion of the first frame into a shared communications channel,” “wherein the first portion is less than a frame length”

Column 7, lines 40-48 of Chiang provides:

The rules checker 40 outputs the forwarding descriptor including the port vector and the frame pointer into the port vector FIFO 56. The port vector is examined by the port vector FIFO 56 to determine which particular output queue should receive the associated frame pointer. The port vector FIFO 56 places the frame pointer into the top of the appropriate queue 58 and/or 68. This queues the transmission of the frame.

Thus, Chiang discloses a rules check that forwards descriptor information into a queue. The port vector, contained in the descriptor information, is then examined to determine which buffers should receive the frame pointer. Applicant submits that forwarding descriptor information to a queue or forwarding a frame header to a queue is not the same as the claimed “initiating a transmission of the first portion of the first frame **into a shared communications channel**,” “wherein the first portion is less than a frame length.” (Emphasis added).

Chiang further discusses transmitting of data by a gigabit MAC. Column 7, line 49 ... Column 8, line 10 provide in part:

... The frame pointers stored in the FIFO-type output queues 58 are processed by the dequeuing logic 76 for the respective transmit MAC units. At some point in time, the frame pointer reaches the bottom of an output queue 58, for example, output queue 58*d* for the gigabit transmit MAC 72*c*. The dequeuing logic 76 for the transmit gigabit port 24*b* takes the frame pointer from the corresponding gigabit port output queue 58*d*, and issues a request to the scheduler 80 to read the frame data from the external memory 36 at the memory location specified by the frame pointer. The scheduler 80 schedules the request, and issues a grant for the dequeuing logic 76 of the transmit gigabit port 24*b* to initiate a DMA read. In response to the grant, the dequeuing logic 76 reads the frame data (along the read bus 69*b*) in a DMA transaction from the location in external memory 36 pointed to by the frame pointer, and **stores the frame data in the internal transmit FIFO for transmission by the transmit gigabit MAC 72*e*. ...**

(Emphasis added).

Thus, Chiang discloses that the dequeuing logic use the frame pointers stored in the FIFO queues to retrieve **all of the frame data for a particular frame** from the external memory. The **entire frame data** is then stored in an internal transmit FIFO buffer for transmission by the gigabit MAC. Thus, Chiang discloses transmitting an entire frame, and Applicant asserts that Chiang never discusses transmitting a portion of a frame. In addition, Applicant submits that transmitting the entire frame data is not the same as the claimed “**initiating a transmission of the first portion of the first frame** into a shared communications channel,” “wherein the first portion is less than a frame length.” (Emphasis added).

In regards to the Examiner’s comment that “the frame portions are transmitted from the queue,” Applicant respectfully disagrees. As shown above, the dequeuing logic 76 stores the entire frame data in the internal transmit FIFO. Applicant submits that storing the entire frame data is not the same as the claimed “**initiating a transmission of the first portion of the first**

frame into a shared communications channel,” “wherein the first portion is less than a frame length.” (Emphasis added).

For at least the reasons discussed above, Applicant respectfully requests withdrawal of the rejection of independent Claims 30, 39, and 47. In addition, Applicant respectfully requests withdrawal of the rejection for the remaining pending claims, each of which depend upon one of the independent claims.

**B. Chiang does not teach the claimed “responsive to initiating the transmission, receiving at the lower medium access control entity a second portion of the first frame.”**

Claim 30 recites in part “responsive to initiating the transmission, receiving at the lower medium access control entity a second portion of the first frame” Claims 39 and 47, although different in scope, contain a similar element. In the latest Office Action, the Examiner did not indicate where Chiang disclosed this element. In the previous Office Action dated October 1, 2009 on page 4, the Examiner cited to col. 8, lines 62-65 as disclosing this claimed element. The Examiner asserted that “the data frames are processed using pipelining.” Applicant respectfully disagrees that Chiang discloses “responsive to initiating the transmission, receiving at the lower medium access control entity a second portion of the first frame.”

Column 8, lines 62-65 of Chiang provides:

The present invention is directed to the internal rules checker 40 (IRC) and the use of the IRC 40 to provide high data throughput by pipelining the processing of data frames and pipelining access to the an IRC address table.

Thus, Chiang is directed to providing high data throughput through pipelining the processing of data frames. As such, Applicant agrees with the Examiner’s statement that Chiang discloses that “the data frames are processed using pipelining.” Applicant, however, submits that pipelining is not the same as the claimed “responsive to initiating the transmission, receiving at the lower medium access control entity a second portion of the first frame.”

Chiang is directed to a “network switch” that uses decision making logic that “employs a **pipelined architecture that enables multiple data frames to be processed simultaneously** to increase data throughput.” See Abstract, emphasis added. Chiang also provides that “The

decision making engine is designed in a pipelined, modular fashion so that **multiple frames may be processed simultaneously.**" See Col. 2, lines 3-5, emphasis added. Chiang further provides that "The decision making engine also includes a plurality of logic engines with each of the **logic engines configured to process a different respective data frame simultaneously** with each other logic engine." See Col. 2, lines 29-32, emphasis added. Thus, Applicant, submits that the pipeline limitation of Chiang is directed towards processing **multiple data frames simultaneously**, and is not directed towards processing portions of a single frame. Processing multiple data frames simultaneously is not the same as the claimed "responsive to initiating the transmission, receiving at the lower medium access control entity a **second portion of the first frame.**"

For at least the reasons discussed above, Applicant respectfully requests withdrawal of the rejection of independent Claims 30, 39, and 47. In addition, Applicant respectfully requests withdrawal of the rejection for the remaining pending claims, each of which depend upon one of the independent claims.

**C. Chiang does not teach the claimed "upon completion of the transmission of the first portion of the first frame, transmitting the second portion of the first frame into the shared communications channel."**

Claim 32 recites in part "upon completion of the transmission of the first portion of the first frame, transmitting the second portion of the first frame into the shared communications channel." Claims 40 and 47, although different in scope, contains a similar element. In the latest Office Action, the Examiner did not indicate where Chiang disclosed this element. In the previous Office Action dated October 1, 2009 on page 4, the Examiner cited to col. 8, lines 62-65 as disclosing this claimed element. The Examiner asserted that "the data frames are processed using pipelining." Applicant respectfully disagrees that Chiang discloses "upon completion of the transmission of the first portion of the first frame, transmitting the second portion of the first frame into the shared communications channel."

As noted above in section II.B. Applicant submits that the pipelining limitation of Chiang is directed towards processing multiple **frames** simultaneously. Applicant submits that processing multiple frames simultaneously is not the same as transmitting a portion of a first

frame and then "upon completion of the transmission of the first portion of the first frame, transmitting the second portion of the first frame into the shared communications channel."

For at least the reasons discussed above, Applicant respectfully requests withdrawal of the rejection of Claims 32, 40 and 47. In addition, Applicant respectfully requests withdrawal of the rejection for the dependent claims 48 and 49 which depend upon Claim 47.

**II. Claim Rejections Under 35 U.S.C. § 103(a) based on Chiang in view of Barbas**

On page 5 of the Office Action, Claims 37 and 46 are rejected under 35 U.S.C. 103(a) as allegedly being obvious over Chiang in view of U.S. Patent No. 6,256,315 ("Barbas"). Applicant respectfully traverses this rejection.

Claim 37 ultimately depends upon Claim 30. Claim 46 ultimately depends upon Claim 39. As such, Applicant submits that Claims 37 and 46 are allowable for the reasons articulated in section I above. For at least the reasons discussed above in section I, Applicant respectfully requests withdrawal of the rejection of Claims 37 and 46.

**III. Allowable Subject Matter**

On page 6 of the Office Action, the Examiner states that Claims 33, 38, 41, 45 and 48 are allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for indicating the allowability of these claims.

**IV. Conclusion**

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or

incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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